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JACC April 1, 2014
Volume 63, Issue 12

Heart Failure and Cardiomyopathies

EFFECT OF DIGOXIN ON MORTALITY IN PATIENTS WITH ISOLATED RIGHT VENTRICULAR DYSFUNCTION SECONDARY TO SEVERE PULMONARY HYPERTENSION

Oral Contributions
Room 146 B
Sunday, March 30, 2014, 9:06 a.m.-9:18 a.m.

Session Title: Update from Clinical Trials in Heart Failure: Year in Review
Abstract Category: 14. Heart Failure and Cardiomyopathies: Therapy
Presentation Number: 912-08

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Background: While digoxin can exert favorable hemodynamic effects in acute right ventricular (RV) failure secondary to pulmonary hypertension (PH), its role in chronic management of these patients is controversial.

Methods: From 2002 to 2012, all consecutive patients with age ≥18 years, severe PH defined by a pulmonary artery systolic pressure ≥65 mmHg, RV hypokinesis, and left ventricular ejection fraction ≥50% were enrolled from 3 hospitals of Montefiore Medical Center. Patients were divided into two groups based on whether or not they were on digoxin for 12 consecutive months after diagnosis of PH. Primary endpoint was 1-year all-cause mortality and secondary endpoint was 1-year hospital readmission.

Results: Of 2,208 patients included (age 71±16; 31% male), 166 (8%) patients were on digoxin therapy. In the entire population, 1-year mortality was 32.6% and readmission was 3.6%. Mortality was significantly lower in digoxin group compared to no-digoxin group (25% vs 33%, RR 0.67 [95% CI 0.49, 0.92], p=0.02), while readmission rate was not different (3.9 vs. 3.6%, RR 1.64 [95% CI 0.84, 3.18], p=NS), Figure. In multivariate analysis adjusted for baseline characteristics, digoxin therapy remained an independent predictor of lower 1-year mortality (p<0.02).

Conclusions: In a multicenter study, we demonstrated for the first time, that in patients with isolated RV dysfunction secondary to severe PH, digoxin therapy improves the survival by reducing 1-year all-cause mortality.